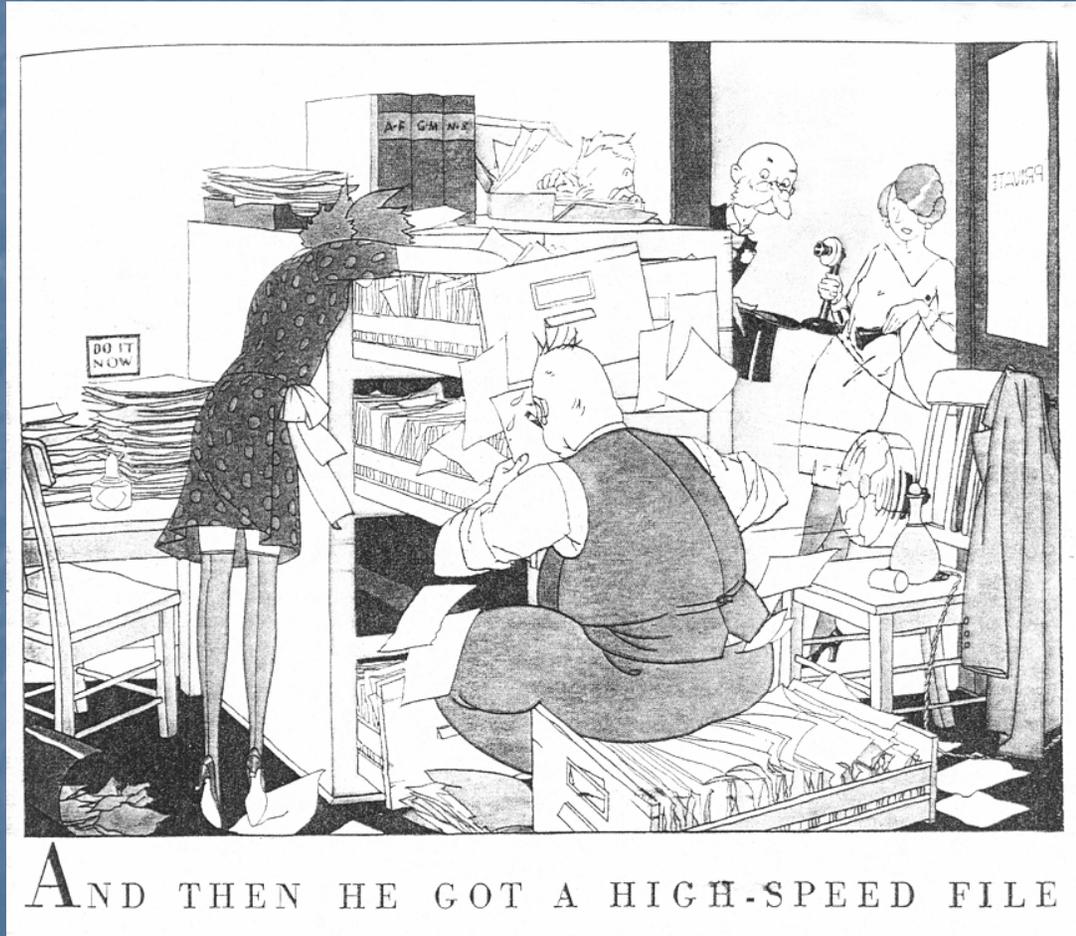


Technology versus Technocracy in the Progressive Office, 1917-1931



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Topic

- Relationship between
 - New administrative technologies of early 20th century
 - and
 - Office Management reform movement of 1910s and 1920s

New Office Technology, popularized 1890-1910

- Typewriters
- Bookkeeping machines
- Dictating machines
- Vertical files
- Adding machines
- Addressing Machines
- Calculating Machines
- Punched card machines



1: The Office Management Movement

The Office Management Movement

- Originated in 1910s
 - First US textbook on office management c. 1914
 - National Office Management Association founded 1919
- Recreation of “head clerk” as powerful executive
 - Use of “scientific” and “systematic” techniques by experts
 - Reaction to influx of women to clerical posts?
- Related to
 - Increasing scale of American business
 - Systematic/Scientific Management movement
 - Personnel management movement

W.H. Leffingwell



How much can Leffingwell save you?

THIS IS HIS GUARANTEE:

With an office force of		Saving
2—	9 persons	10 per cent of your time
10—	24 “	15 per cent of your payroll
25—	99 “	17 per cent of your payroll
100—	1000 “	20 per cent of your payroll

These figures are meant to be taken literally. They are a conservative estimate by Mr. W. H. Leffingwell, President, W. H. Leffingwell Company, efficiency engineers, of the savings which you can expect from the application of his methods to your office work.

“Too good to be true,” you may say. But when you consider that he decreased the payroll of an Illinois concern 40%, that he cut the force of one department of an Ohio concern from 25 to 5 employees, that he has effected wonderful economies in concerns facing practically all kinds of conditions, isn't it worth while at least to investigate these claims, especially when it costs you nothing?

From an advertisement used to
promote Leffingwell's 1917 book
Scientific Office Management

Leffingwell's System

- Explicitly derived from Taylorism
 - Careful layout of office, for efficient flow of work.
 - Division of tasks into simple units, scientific measurement and analysis of each part to determine "the one best way".
 - Standardization of all procedures, forms, letters, equipment and personnel (test & train).
 - Use of appropriate machines and equipment to maximize efficiency of each task.
 - Payment of production bonus incentives to supplement salaries.



THIS CLERK'S OUTPUT WAS TRIPLED

In even so simple an operation as opening mail there is a right and a wrong way. Mr.

Historical Treatment I

- Labor & Social History
 - Large literature on women & office work
 - Davies, Strom, Rotella, Fine
 - Leffingwell and “Taylorization” feature prominently
- Departure point is Harry Braverman. Links
 - Deskilling and degradation of clerical work
 - Feminization of clerical work
 - Mechanization of clerical work

Historical Treatment II

- Business history: Rise of big business
 - Systematization as crucial managerial tool
 - New communication technologies crucial (Yates)
 - Importance of new class of middle management (Chandler)
 - Treated as fairly homogenous (Zunz)

The Executive Office Manager

6

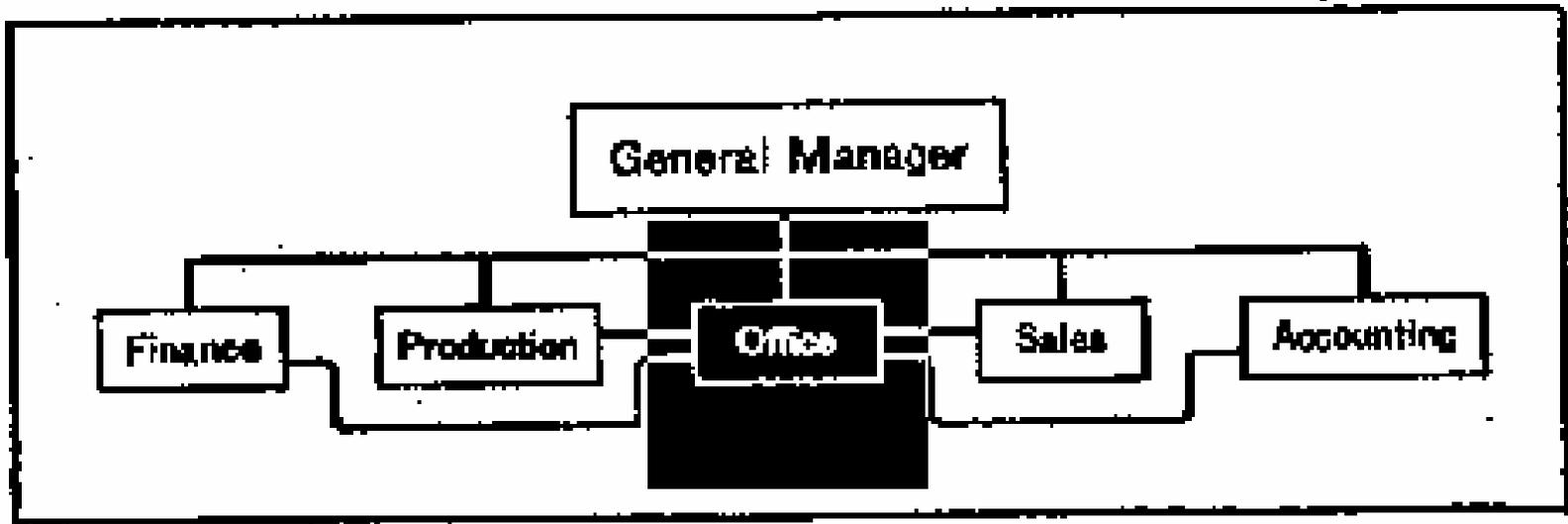


Figure 6: Chart showing relationship of office to other major departments of a business

Laying Claim to Organizational Design

“The strain put upon the office activities had forced the management to remodel completely the organization - in response to necessity.”

Galloway, *Office Management: Its Principles and Practice* (Page 16)

2: My Analytical Findings

My Data

- Primarily from 1930-31 Women's Bureau Survey
 - Original notes from detailed visits
 - Questions on machines used
 - Questions on office & personnel management
- 91 large offices in New York and Philadelphia
 - Mean size: 580 clerical workers
 - Office workforce 43% female
 - Service sector firms
 - Insurance, Utility, Publishing, Bank, Investment

My Findings: Technology

- Office Machines widely used
 - Bookkeeping: 74%
 - Calculating or Adding: 80%
 - Dictating: 60%
 - Addressing: 65%
- Many women employed as machine operators
 - Of 22,817 women
 - 2,620 typists
 - 2,015 bookkeeping/adding/calculating operators
 - 543 telephone operators
- Larger firms much **less** feminized

My Findings: Management

- At least one third had an “office manager”
- Of women’s bureau sample, proportion with
 - Any clerks on incentive pay: 9%.
 - Formal training of any clerks: 10%.
 - Testing (incl. Medical) of any clerks: 28%.
 - Laid off a single clerk through efficiency savings (including machines): 10%
 - An office procedures staff: 15%
- No correlation of technology <> management <> feminization of firm

Office Management Movement

- Office manager never becomes executive
 - 1929 survey of National Office Management Association members finds that of 23 duties
 - Hiring/firing “clericals”, buying equipment and setting office routine are top duties
 - Controlling budget and planning are bottom
- Leffingwell in 1930s bemoans low status, failure to attract able men
 - Remains office personnel supervisor

My Argument

- I found that
 - Machines are ubiquitous
 - Scientific office management is rare
- Technology vs. Technocracy
 - Machines may be substitute for rationalization
 - Efficiency and systematization are partially symbolic/ideological
 - Office managers are not the only source.

3: Science and Efficiency were
Engineered In

No Chair Like This

**For Speed in Work
For Health, Comfort,
Contentment**

The Milwaukee Health-Comfort Chair surpasses in every particular any similar chair on the market. It is new and scientifically correct in every principle—a sensation in hundreds of offices where it is now in use.

Employers are astonished at the great increase in work which users accomplish, as well as the mental and physical improvement of these users. Employees are delighted with the ease, comfort, and restful relaxation it affords.

Scientifically designed after years of experimenting—sturdily built—easily and quickly adjustable to height, weight and physical characteristics of the user, the Milwaukee Health-Comfort is an outstanding achievement—a necessity in every office, large or small.

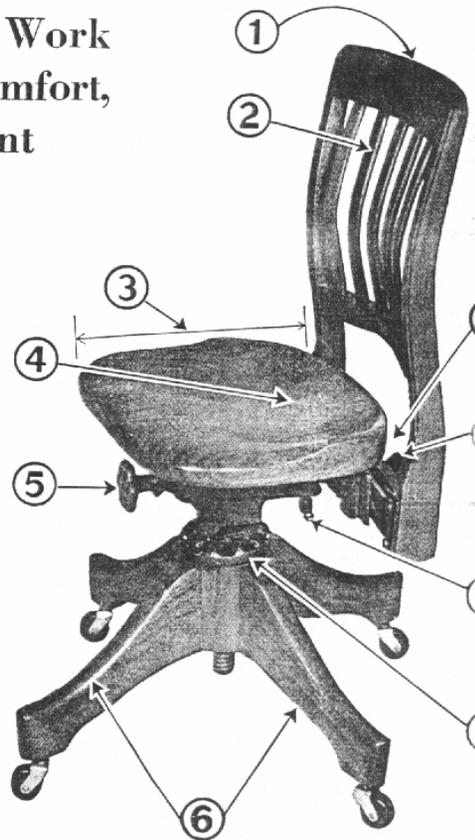
Statistics show that this amazing chair enables employees to double the work ordinarily done each day, with less effort and fatigue, at a cost under 2% of the salary paid these workers each year.

THE MILWAUKEE *Health-Comfort* CHAIR

is a product of the Milwaukee Chair Co., for more than 50 years makers of Milwaukee quality office chairs. In every detail of design and construction this new Health-Comfort Chair embodies the same quality and integrity that has won fame for Milwaukee Office Chairs. It is not only superior and most practical, but it is the best built chair. It will give everlasting satisfaction from every standpoint.

The Milwaukee Health-Comfort Chair is made in four styles, in Quartered Oak; Birch, in mahogany and walnut finish; and in Solid Mahogany and Walnut. Also made in high stools for bookkeepers, draftsmen and telephone operators, in the same styles and finishes.

Read carefully the ten special features, then write for full particulars regarding this wonderful chair.



10 SPECIAL FEATURES

- 1 Rounded top cross-slat conforms perfectly to the contour of user's back, giving correct support where needed.
- 2 Spindles of back-rest are curved and rounded to conform to the spine.
- 3 Seat is also shallow so that front of chair will not interfere with normal blood circulation.
- 4 Seat has deep form-fitting saddle necessitating correct yet comfortable sitting position.
- 5 Convenient hand-wheel for quick adjustment of seat spring.
- 6 All edges and corners are rounded to prevent rubbing or scuffing of shoes or damaging clothing.
- 7 Small lock pin to permit raising or lowering of chair seat.
- 8 Thumb Screw for adjusting back-rest forward or backward.
- 9 Hand wheel adjustment for raising or lowering back-rest for different heights of users.
- 10 There is no possibility of pinning hands or catching clothing between chair back and seat.

The MILWAUKEE CHAIR CO.

Executive Offices: 666 Lake Shore Drive, Chicago

MILWAUKEE CHAIRS

“It is new and scientifically correct in every principle....

Scientifically designed after years of experimenting....

Statistics show that this amazing chair enables employees to double the work done ordinarily every day....”



Sold!

In 4 Years of Free-Trial Selling
Only 3 NEO-LEUM Desk-Tops Came Back

TEN
NEO-LEUM
ADVANTAGES

Non-glaring, eliminating eyestrain, preventing fatigue and increasing efficiency. Ideal writing surface, due to proper resilience.

Texture of surface holds paper in

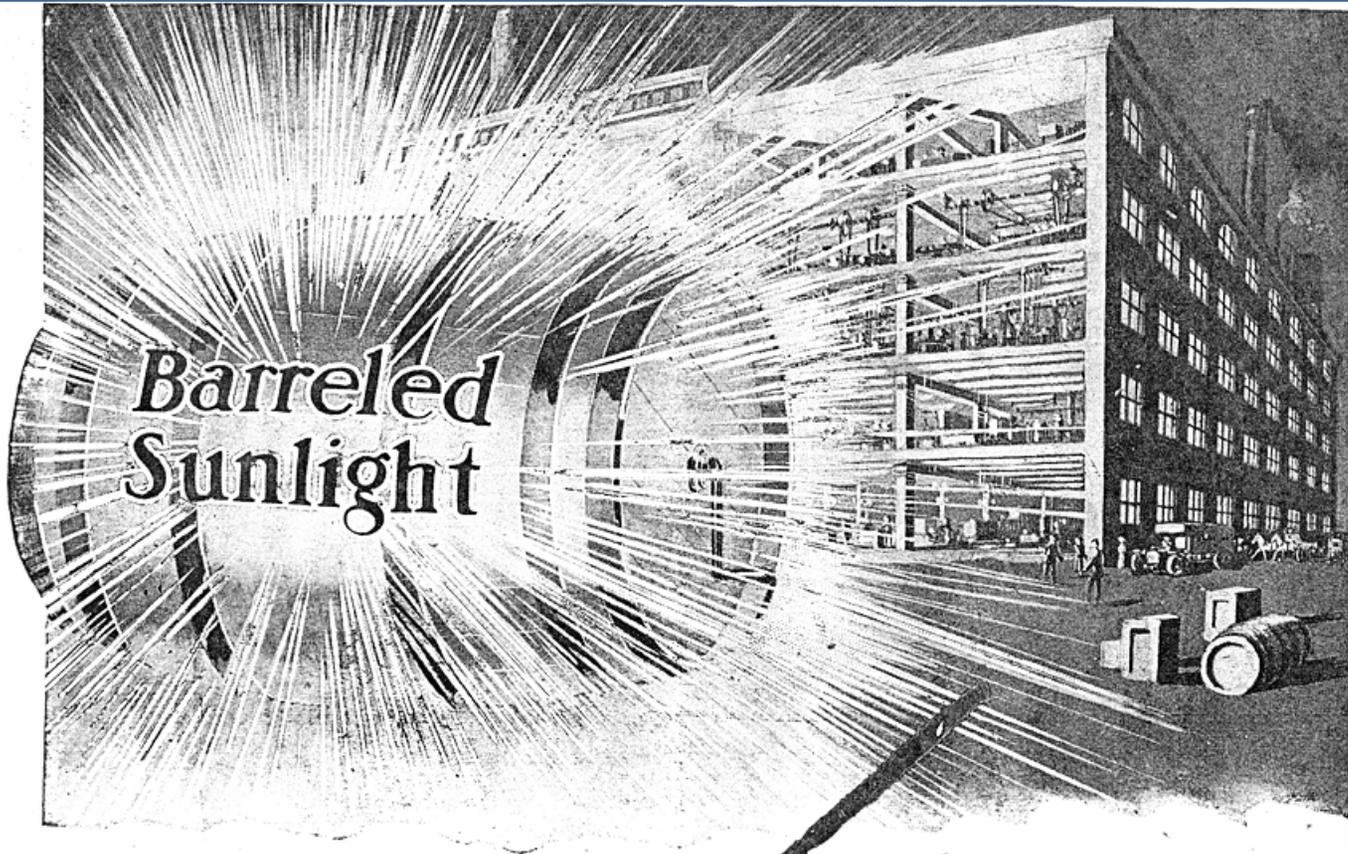
THOUSANDS of firms have tested Neo-Leum under our liberal 10-day trial offer. They have given these money-saving desk tops the hardest tests their offices permitted. They have checked the ten advantages claimed for Neo-Leum, point by point, under actual working conditions. They have decided for themselves, without any salesman to influence the decision, whether or not Neo-Leum actually demonstrated savings far greater than its cost.



American Insurance
Company Building,
Newark, New Jersey.
Architects: John H.
& Wilson C. Ely.
General Contractor:
Starrett Bros. &
Eken, Inc. Sealex
Floors installed by
Newark Parquet
Flooring Company.



**They selected floors that increase
employee efficiency**



Registered U. S. Pat. Off.

Take the side walls and

SUPPOSE you could take the side walls and roof right off your factory building. What a flood of light would pour in!

Every manager knows the part light plays in the operating scheme of industry. Good light is necessary to contentment, efficiency, more and better work. Insufficient light causes unrest, fatigue, spoilage, discontent.



By the old way, these 10 operations were necessary:

- | | |
|--|---|
| 1. Strip razor. | 8. Shave unshaved side of face. |
| 2. Work up lather in cup. | 9. Wash off lather. |
| 3. Apply lather to face. | 10. Apply lotion to prevent soreness and avert burning. |
| 4. Rub in with fingers. | |
| 5. Shave one side of face. | |
| 6. Strip razor again. | |
| 7. Renew dried-up lather on unshaved side of face. | |

By the Mennen way only 5 operations are necessary:

- | | |
|--|---|
| 1. Strip razor. | ing unnecessary as lather does not dry). |
| 2. Apply Mennen's Shaving Cream. | |
| 3. Lather with brush. | 5. Wash off lather (no lotion or other soothing application necessary). |
| 4. Shave entire face (re-stripping and re-lathering unnecessary as lather does not dry). | |

Compare the Old Way of shaving with the Mennen Way

4: Machine Salesmen Usurped Role of Consultant

STORIES OF A BUSINESS DOCTOR

I. THE BUSINESS SOMNAMBULIST

BY V. HUGO KALLMAN

**'He turned on me with a glare'
(BEFORE)**



(System, 1904)

**""Here is your day's work' I said"
(AFTER)**



For Analysis ~ THE CHEMIST

Any business can buy an outfit of the test-tubes, retorts, beakers, filters, acids, etc., etc., necessary for either a quantitative or qualitative analysis. Instead business executives seek specialized service in such matters, because the materials and equipment mean nothing unless used with expert knowledge.



The materials of which a shipping package is made is of no more importance than the brains and experience which go into its design. Many can see what the box should be made of—few can design and manufacture the box exactly right.

For Packaging ~ the Package Engineer



He Knows Packages—
THE Jefferson Glass Co.

A SHIPPING box isn't "just a box." It's a means of holding—or losing—customers, of decreasing or increasing damage claims, of saving labor or wasting it, of reducing freight expense or paying needless charges.

In which class is *your* shipping box?

Let an H & D "P. E."—*Package Engineer*—study your present methods and tell you how they match up with the best modern practice. He will bring to you the experience of a thousand shipping rooms, plus his own first-hand factory-

4800
business men
sell the products of
**THE NATIONAL
CASH REGISTER COMPANY**



WE SOMETIMES feel that the finest products of The National Cash Register Company are the men who represent us all over the world.

There are many salesmen, but from the thousands who apply to us each year only a few measure up to the standards this organization requires in its representatives.

They come from every line of business. And they carry back into their former fields the National Cash Register message of protection, economy, information and service.

There are more than 4800 of these men in all parts of the world.

Every man of them has learned to search out the

business losses that spring from carelessness, lack of information, and temptation.

Every man of them understands to the last detail how National Cash Register products stop these losses.

Our representative who calls on you does so in the sincere belief that the proper National Cash Register equipment will protect and increase your profits.

He is an expert on efficient business machinery, and its application to modern business problems.

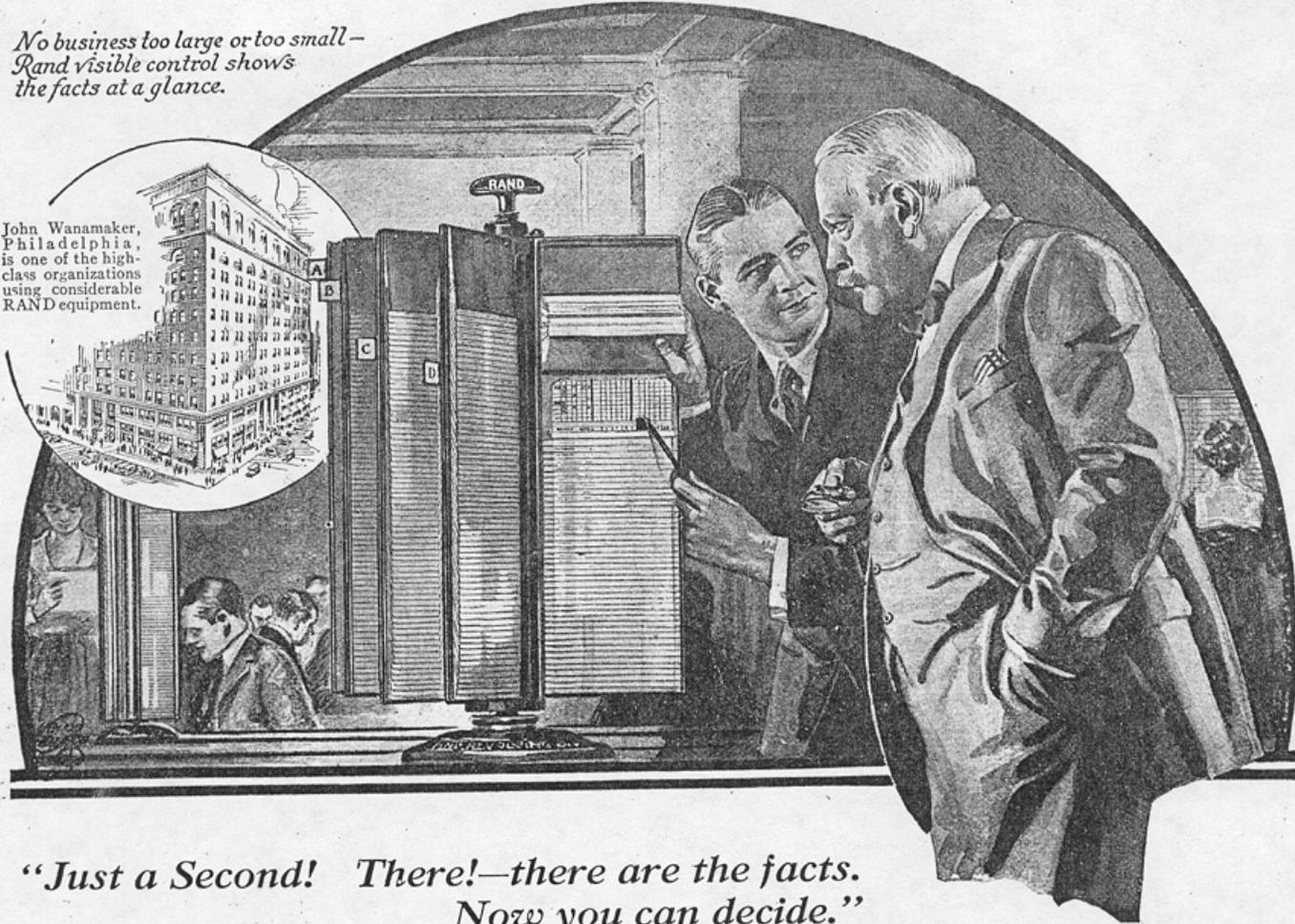
You will find him intelligent, courteous, and eager to serve. For only through service rendered—*money saved*—can he hope to succeed.

THE NATIONAL CASH REGISTER COMPANY
DAYTON, OHIO, AND PRINCIPAL CITIES THROUGHOUT THE WORLD
Modern machine systems for every business, priced from \$60 up, in the U. S. A.

“He is an expert on efficient business machinery and its application to modern business problems.”

*No business too large or too small—
Rand visible control shows
the facts at a glance.*

John Wanamaker,
Philadelphia,
is one of the high-
class organizations
using considerable
RAND equipment.



*“Just a Second! There!—there are the facts.
Now you can decide.”*

—all the facts concisely in the least possible time; glance down the panel holding RAND cards till you reach the name you want, swing up the card just ahead—and there are all the recorded facts. With RAND Visible-Card Systems one clerk does the work of four.

Automatic Results Guaranteed

“....Acme visible records *force* their owners to *use* the facts - profit by them, save money by them, stop losses before they get started....

Acme *always* delivers what it promises. Its successful operation in your business will be automatic...”

(Acme Visible Records advertisement, 1932)

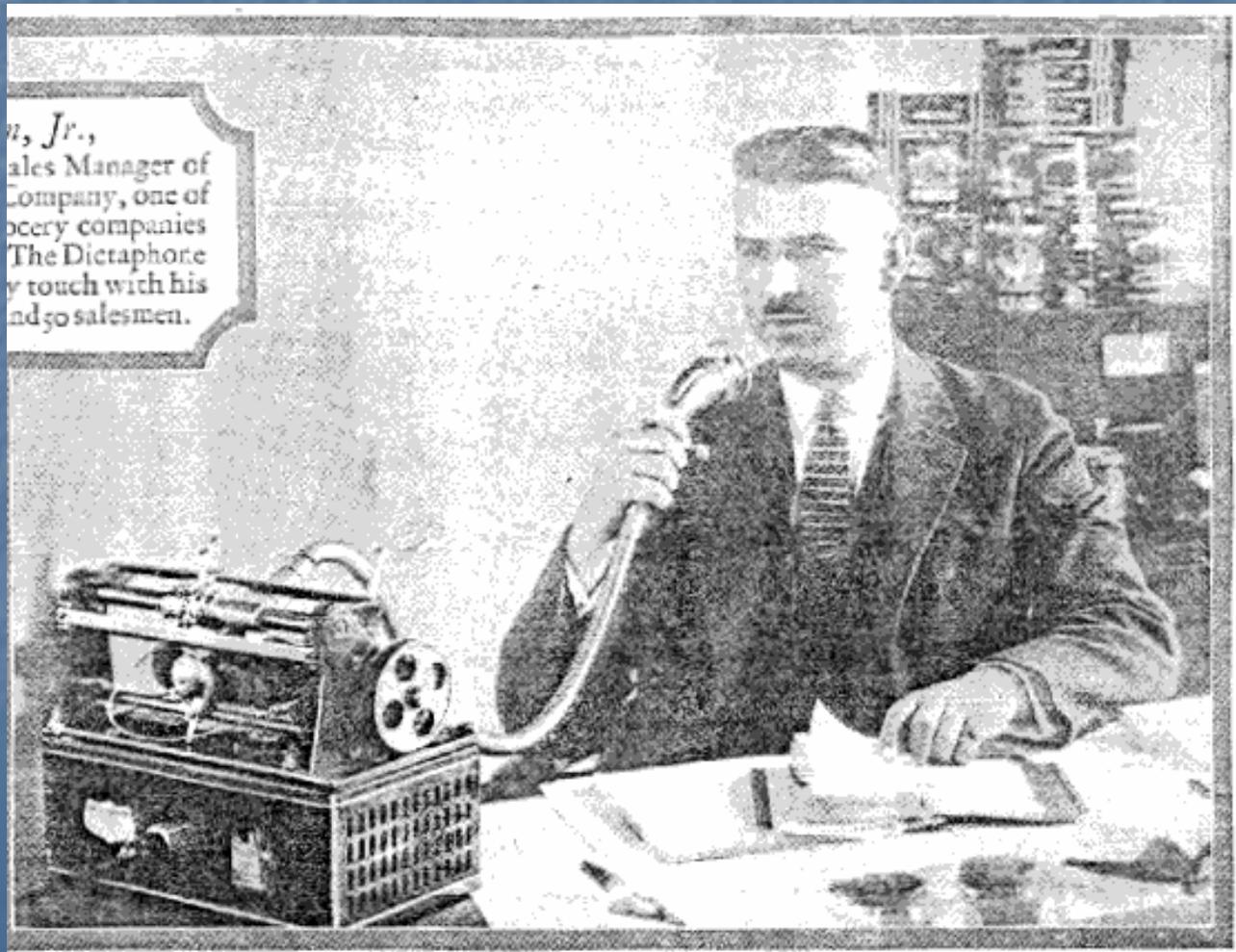
Guidelines for Index Visible card system salespeople

- Don't criticize any current practice or recommend radical reorganization or incentive pay.
 - Show 'an expressed favorable regard for the executives and company.'
- Don't hang round -
 - 'executive interest cannot be sustained over a prolonged period'.

Leffingwell Attacks Quacks

“In almost every case, the [false purveyor of scientific management] has a panacea, a scheme, or system, which he claims will at once cure all the ills of the office, and all he desires is an opportunity to ‘install’ this system.... which is applied to the office on the same principle that a porous plaster is applied to the back of a quack’s patient.”

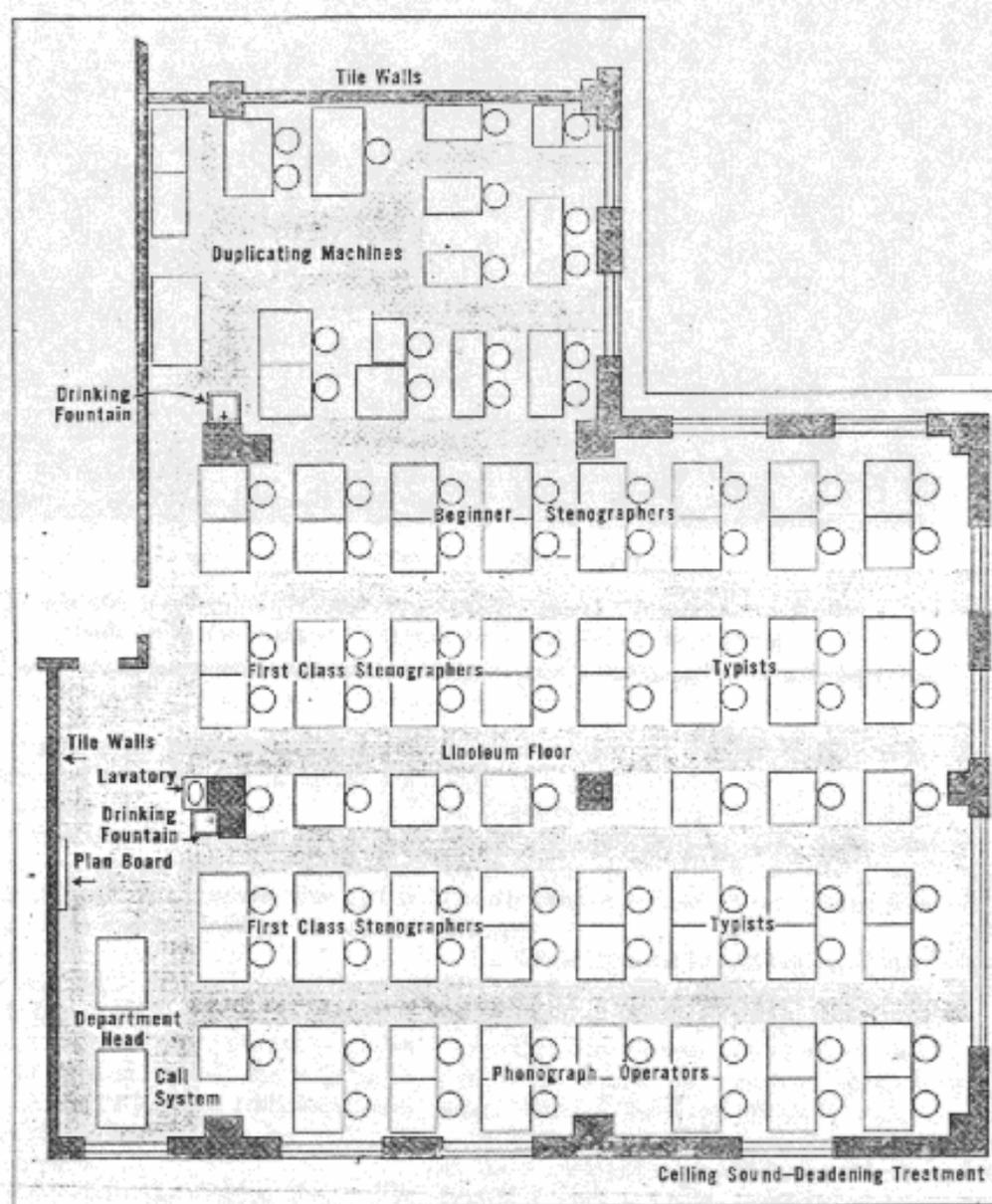
5: Dictating Inefficiency – A Case Study



Experts Praise Dictating Machines

“The most interesting development in recent years in connection with correspondence has been the introduction of the dictating machine. Its scope is not yet appreciated. It is likely to bulk almost as large as the telephone in business, in the future.”

Galloway, Lee. *Office Management: Its Principles and Practice*. Roland Press, 1919 (3rd edition).



PLANNING A CENTRAL TYPING DEPARTMENT

This is the floor plan of a typing department devised to get the greatest efficiency

Dictating Machines in Practice

- Dictating machines operators accounted for only 12% of all stenographers at firms using them.
- Very few firms had centralized all stenography.

“What’s Wrong With Shorthand?”

- It’s the ‘ring and wait’ system.
- If only she could take it as fast as I think.
- Out sick, so I have to wait.”

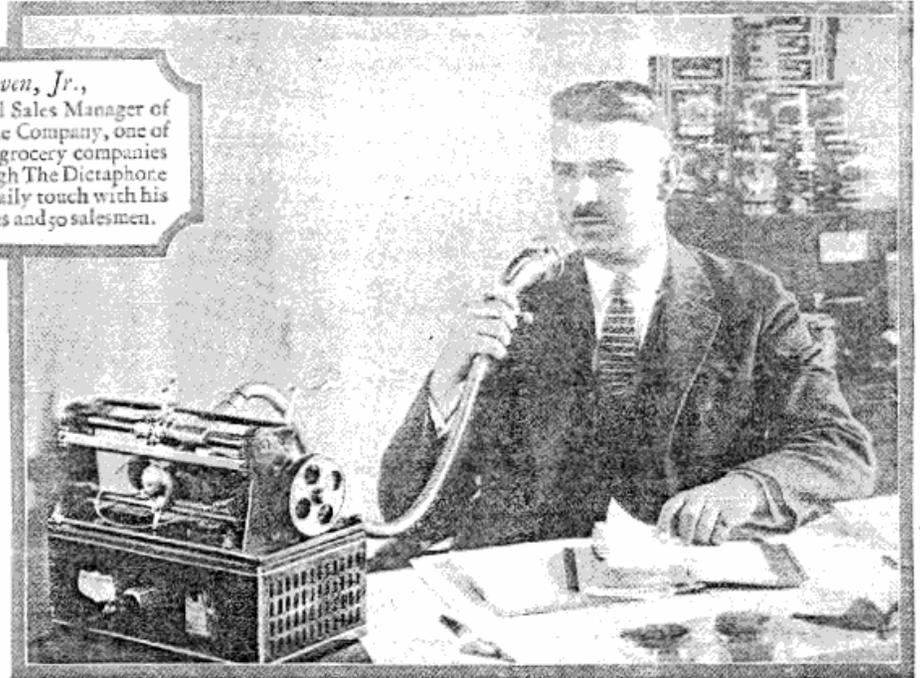
*W. T. Hooven, Jr.,
Secretary and General Sales Manager of
The Hooven Mercantile Company, one of
the oldest wholesale grocery companies
in the country. Through The Dictaphone
Mr. Hooven keeps in daily touch with his
company's 9 branches and 50 salesmen.*

What's Wrong With Shorthand?

Executives say:—

"It's the 'ring and wait' system."
"If she could only take it as fast as I
think."
"She can't help me with other things."
"I'm forced to cut dictation short."
"If I could only dictate while it's fresh
in my mind."
"Out sick, so my letters have to wait."
"She can't get out all she's taken."

*That's enough! I'll send in the cou-
pon below on general principles.*



Shorthand was a daily drag
Now he finds it easy to keep in touch with his whole salesforce

Why Firms Purchased

- “A super-salesman has persuaded our executives that Ediphones can be used here at a saving, but my machine is going back next week.”
- Purchased “for the sake of convenience, so that a man could dictate at any time that he wanted”

Implications

- Rethink assumptions about
 - Prevalence of scientific office management
 - Connection of systematization, efficiency & machinery.
- Look for different identities and interests within ranks of middle management from 1910s onward
- Problematic nature of technical claims to administrative expertise
 - Computer gives sturdier basis for expert power

What period do you belong to



PUBLISHED BY

MAKERS OF HIGH GRADE FILING CABINETS

 **OFFICE SPECIALTY MFG. CO.**
LIMITED
AND OFFICE FURNITURE IN STEEL AND WOOD
CANADA

What period do you belong to?

PREHISTORIC MAN SCRATCHED HIS RECORDS ON THE WALLS OF HIS HOME AND ON THE TUSKS AND HORNS OF THE ANIMALS WHICH HE KILLED



The Cave Man

THE investigations of archaeologists in all parts of the world fail to prove satisfactorily that prehistoric man had any fixed or premeditated idea of establishing or preserving records, nor did he care to communicate with persons at a distance. He lived in the dawn of reason and progress and his life must have been a constant struggle against killing or being killed; eating or being eaten. He shared the possession of the earth with the mammoth, the cave-bear and the woolly rhinoceros. He was a nimble exponent of the law of self-preservation.

He made articles of a strictly utilitarian nature, weapons of offence and defence, and crude utensils for cooking and household use, and his only attempt at record-making seems to have been the carving of crude images and symbols of a rudimentary nature on the bones and horns of animals and on his cave walls. These carvings were laboriously made with flint fashioned to a point. After his carvings were made he took little, if any, pains to preserve them. The specimens that remain seem to have been preserved accidentally from the ravages of time in naturally sheltered places, discarded apparently without thought or care of what became of them.

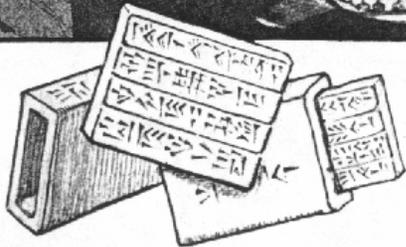
Through the Ages of Stone, Bronze and Iron, when Man was emerging from primeval chaos and becoming conscious of the first glimmering of order, he apparently took no thought of preserving a record of his achievements and possessions, or accumulating knowledge, beyond the drawing and carving of crude and grotesque outlines of the things around which his world revolved. Therefore, it is only on his

established ability to draw and carve, perhaps for pastime, perhaps for a more serious purpose, that he is entitled to a place in the chronology of Record-Keeping.

“...when Man was emerging from primeval chaos and becoming conscious of the first glimmering of order he apparently took no thought of preserving a record of his achievements and possessions, or accumulating knowledge, beyond the drawing of crude and grotesque outlines of the things around which his world revolved.”

What period do you belong to?

THE MAKING AND FILING OF PUBLIC RECORDS IN A BABYLONIAN OR ASSYRIAN GOVERNMENT OFFICE AND THE CUNIFORM METHOD OF WRITING.



The operation of signing documents with a seal cut into a roller was also a common practice. This is the antecedent of our present-day rubber stamp.

Babylonian and Assyrian Records

RECENT translations of ancient Babylonian and Assyrian records reveal the interesting fact that many of them relate to business transactions and disputes.

The Babylonians developed a banking system, in which they deposited and issued "brick" cheques and bills of exchange. About 1,000 B.C. there existed in Babylon a firm of bankers and money-lenders operating under the name of "The Sons of Egibi." This firm attained such wealth and influence that one writer describes them as "the Rothschilds of the ancient world." The operations of this firm were noted down on clay tablets and filed in stone jars bearing the name of contracting parties and witnesses. A general practice in those days of recording real estate and other financial transactions was to inscribe the conditions on tablets in duplicate. The first copy was inscribed and baked. A cover of soft clay would then be made and a copy of the original document written upon it. This document would be filed in the record office and could be seen at any time upon payment of a fee. In case of dispute, and upon payment of an extra fee, the outer cover would be broken and the original consulted, after which it would be again encased in an envelope of clay and re-filed.

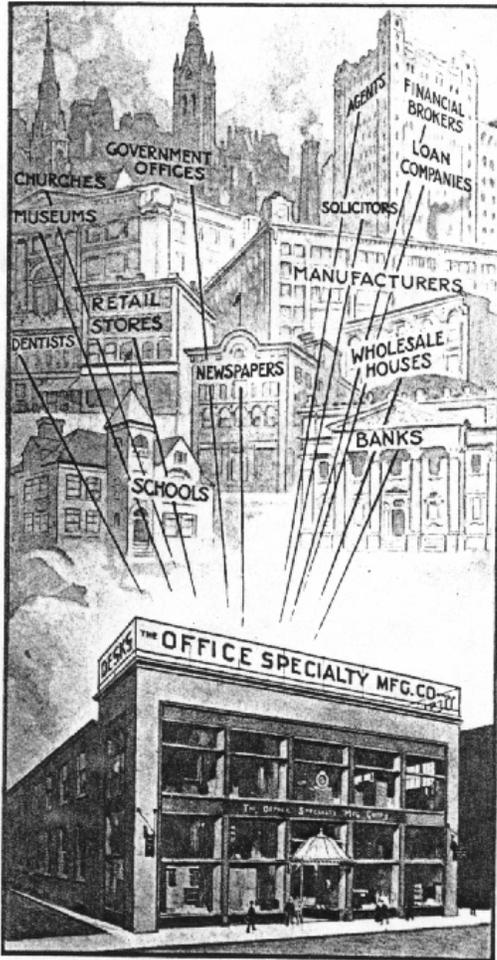
The illustration shows clerks at work in an Assyrian government office in which the cunifform method of writing was employed. On one corner of the desk appears a box of stylus with which the characters were made on soft clay tablets which were afterwards baked or dried—also the method of filing them as records.

“The illustration shows clerks at work in an Assyrian government office... On one corner of the desk appears a box of styles with which the characters were made on soft clay tablets...

What period do you belong to?

IN EVERY INSTITUTION AND BUSINESS, RECORD-KEEPING IS A HIGHLY IMPORTANT UNDERTAKING AND SHOULD RECEIVE THE MOST CAREFUL CONSIDERATION.

The Nerve-Centre of Modern Record-Keep- ing Systems



THE Head Office of The Office Specialty Manufacturing Company, Limited, is located on Wellington Street West, Toronto. The building itself is a model of modern construction and possesses what our ancestors apparently thought superfluous in commercial buildings, abundance of light and air.

Wellington Street is named in honor of the Duke of Wellington, the hero of Waterloo. Wellington Street West might properly be termed of comparatively recent development, but the old part of the Street, more particularly the neighborhood of Church, Wellington and Front, has been the centre of local interest and activity since the founding of the City.

It is the influence that emanates from the office and the executive departments that determines the destinies of a business. Their knowledge must be complete and authoritative. A small business to grow along right and healthy lines requires to be directed according to the dictates of proper records. A large business can only be rightly guided when the reins of knowledge are available.

The influence of Office Specialty Systems is over many successful businesses in Canada, furnishing the nerve centre which enables it to meet situations equipped with complete and accurate records.

We have put many years of thought and experience into the making of filing and recording devices. We have not spared time or money or labor, and the result is that we are now

able to offer every business and institution a system of filing and record-keeping adapted to its particular needs and representative of the very highest development of the art.

Wellington Street West,
Toronto - The Nerve
Center of Modern Record
Keeping Systems.

“The building itself is a model of modern construction and possesses what our ancestors apparently thought superfluous in commercial buildings, abundance of light and air.”

Women as % of Clerical Workers by Size and Type of Firm

